

Notice of Allowability

Application No.

10/562,827

Examiner

Jerry Martin Blevins

Applicant(s)

KAMADA, KOU

Art Unit

2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed January 9, 2007.
2. ☒ The allowed claim(s) is/are 1-4,6-13.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

Response to Arguments

Applicant's arguments, see pages 6-8, filed January 9, 2007, with respect to claims 1-4 and 6-13 have been fully considered and are persuasive. The rejection of claims 1-4 and 6-13 has been withdrawn.

Particularly with respect to claim 1, examiner acknowledges that the previously applied prior art reference to Fujiyama (US 2003/0085387) fails to teach any alignment of molecules within an optical fiber, but merely teaches a relationship between the positions of the molecules within the optical fiber, as found in the previously cited paragraph 112.

Particularly with respect to claim 6, examiner acknowledges that the previously applied prior art reference to Fujii (JP 10-245410) fails to teach a temperature difference between a center portion and a peripheral portion of a perform, but merely teaches setting a temperature difference between glass transition temperatures of layers of a fiber, as found in the previously cited abstract.

Allowable Subject Matter

Claims 1-4 and 6-13 are allowed.

The following is an examiner's statement of reasons for allowance:

Regarding claim 1, the prior art, as best exemplified by Fujiyama, teaches a plastic optical fiber comprising a core region having a center line along a longitudinal

axis of the fiber, and in any plane perpendicular to the center line, a refractive index of the core region increases along a direction going from a periphery portion to the center line (paragraphs 172-182), and in any plane parallel to the center line and containing the center line, a birefringent index varying along a direction going from the center line to a periphery portion perpendicular to the center line (paragraph 2). However, Fujiyama does not teach that molecules in the core region are aligned along the longitudinal axis and a degree of the alignment varies along a direction going from the center line to a peripheral portion perpendicular to the center line, and that the variation of the alignment degree causes a refractive index profile in the core. Rather, Fujiyama merely teaches a relationship between the positions of the molecules within the optical fiber (paragraph 112). Furthermore, Fujiyama, taken alone or in combination with the prior art, fails to disclose or render obvious alignment of molecules within the core of an optical fiber.

Claims 2-4 and 7-13 are allowed based on their dependence from allowed base claim 1.

Regarding claim 6, the prior art, as best exemplified by Fujiyama, teaches a process for producing a plastic optical fiber comprising drawing a perform (paragraphs 121 and 138-142) comprising at least one region formed of a material having an intrinsic birefringence (paragraph 2) into the fiber. Fujiyama does not teach at least two zones where a temperature is set to be different from each other thereby creating a temperature difference of 5 degrees Celsius or larger between a center portion and a periphery portion of the perform before the perform is drawn into the fiber. Fujii teaches

Art Unit: 2883

setting a temperature difference of 5 degrees Celsius or larger between glass transition temperatures of layers of a fiber (abstract). However, Fujii fails to teach setting a temperature difference between a center portion and a peripheral portion of a perform. Furthermore, Fujiyama, taken individually or in combination with Fujii and the prior art as a whole, fails to disclose or render obvious setting a temperature difference between a center portion and a peripheral portion of a perform before the perform is drawn into an optical fiber.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry Martin Blevins whose telephone number is 571-272-8581. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2883

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JMB



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